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## NZ Information Technology Graduate

Seeking a role as a Junior Full Stack Developer

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An astute, accomplished and intelligent professional who has achieved at an advanced level in Microbiology, now pursuing a new career pathway as a Software Developer. Possesses fundamental skills and foundational knowledge in software development, web technologies and databases. Able to leverage advanced level training, skills and experience in the field of science and translate these capabilities into the software development field. Offers a proven ability to grasp complex concepts and to methodically and logically resolve problems.

## Software Projects

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### Research data analysis and display website ([fungi-app.azurewebsites.net](https://fungi-app.azurewebsites.net))

- Automated **data analysis** of raw experimental data from luminescence plate reader using **Python**
- Produced web app to display microbiology research data (**Dash**, **Plotly**)
- Reduced the time for the research group to process and analyze the data

### Blogging website ([aby-app.azurewebsites.net](https://aby-app.azurewebsites.net))

- Full stack development project.
- A blogging website with full features. Built from scratch
- Implemented authorisation and authentication
- Implemented **MVC** and **DAO** design patterns
- Built images by **Docker** and deployed the container on **Azure**
- Technologies including **HTML/CSS/JavaScript**, **Node.js**, **Express**, **SQLite**

### Blog admin login app (<https://github.com/Tuicaodan/blog-admin-swing-interface>)

- A basic administrative user interface (**GUI**), built using **Java Swing**
- App can read/delete users' info from server database
- The app is communicated with the server database by **REST API**
- Implemented **MVC**, **Adapter** and **Observer** design patterns

### iTunes music covers retrieval app ([itunes-song-cover-app.azurewebsites.net](https://itunes-song-cover-app.azurewebsites.net); access code: DQ)

- A web app to retrieve song covers from iTunes
- Learned CSS framework (**Tailwind**) and **NoSQL** (MongoDB) reading, writing and updating through Node.js
- Features include using **iTunes search API** to update song information and album covers

## Qualifications

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**Postgraduate Certificate in Information Technology – GPA 9/9 – University of Auckland | 2021**

**Master of Science (Microbiology) – GPA 8.48/9 – University of Oklahoma, USA | 2014**

**Bachelor of Engineering (Light Industry Biotechnology) – Sichuan University, China | 2011**

## Technical Skills and Certificates

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**Object-Oriented Programming:** Java, C#

**Front-End Development:** HTML, CSS, JavaScript

**Back-End Development:** Node.js, Express, SQL, REST API, NoSQL    **Tools:** Git, Docker

**Knowledge:** Unit testing, Design Patterns, Responsive Web Design, Agile

**Data Analysis:** Python

**Certificates:** Azure Fundamentals Certification

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## Professional Experience

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**University of Auckland** ([www.auckland.ac.nz](http://www.auckland.ac.nz))

**Research Technician** | Feb 2018 – Present

- Academic literature research
- Conduct and assist with a wide range of experiments using fungi and pathogenic bacteria at PC2
- Investigate the effects of small chemicals (epigenetic compounds) on fungi growth
- Carry out liquid chromatography-mass spectrometry (LC–MS) analysis for active fungi culture
- Optimise laboratory operations, aid in the development or modification of experimental protocols
- Develop a pipeline for data analysis and data visualisation

**Pace Analytical Energy Services LLC, Pittsburgh, Pennsylvania, USA** ([www.pacelabs.com](http://www.pacelabs.com))

**Molecular Scientist** | Apr 2015 – Nov 2017

- Carried out and managed laboratory testing plans and procedures, and maintained accurate logbooks of all procedures
- Developed new analytical procedures and authored Standard Operating Procedures for new systems
- Operated, maintained, calibrated and debugged laboratory equipment and software systems
- Independent responsible for lab equipment and supply purchasing up to 20k
- Ensured the laboratory was effectively sanitised and correct level of stock maintained

**University of Oklahoma, USA** ([www.ou.edu](http://www.ou.edu))

**Research Assistant** | Aug 2011 – Oct 2014

- Participated in the full lifecycle of data collection, experimental design, analysis and reporting
- Prepared and wrote research papers
- Provided training to new laboratory staff

## Personal Details

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**Languages:** English (fluent) | Mandarin (native)

**Certificates:** CPR | AED (First Aid)

**Awards:** Third-Class School Comprehensive Scholarship

**Community:** Volunteer – “Challenge Cup” (for National students) | Wenchuan Earthquake

## Referees

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Professional and character referees available on request